Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original) A test access point structure on a printed circuit board, comprising:

a trace printed on a dielectric;

a solder mask characterized by a solder mask thickness and layered over said trace, said solder mask having a hole exposing a portion of said trace at a test access point location; and

a solder bead soldered to said exposed portion of said trace in said hole of said solder mask, said solder bead projecting through said hole and having a solder bead thickness greater than said solder mask thickness.

2. (Original) A test access point in accordance with claim 1, wherein:

said trace is characterized by a substantially constant trace width leading up to said test access point location and a narrower trace width that is narrower than said substantially constant trace width at said test access point location.

3. (Original) A test access point structure on a printed circuit board, comprising:

a trace printed along an x-y plane in an x-, y-, z-coordinate system of a dielectric, said trace generally characterized by a trace thickness along a z axis perpendicular to an x-y plane of said dielectric;

a test access point structure conductively connected to said trace at a test access point, said test access point structure projecting along a z axis in an x-, y-, z-coordinate system above an exposed surface of said printed circuit board to be accessible for electrical probing by an external device.

4. (Original) A test access point in accordance with claim 3, wherein said trace is characterized by a substantially constant trace width leading up to said test access point and a narrower trace width that is narrower than said substantially constant trace width at said test access point.

5. (Original) A test access point in accordance with claim 3, wherein said test access point comprises a solder bead.

6. (Original) A test access point in accordance with claim 5, wherein said trace is characterized by a substantially constant trace width leading up to said test access point and a narrower trace width that is narrower than said substantially constant trace width at said test access point.

7. (Original) A test access point in accordance with claim 3, wherein said test access point is formed integral to said trace and characterized by an increase in thickness at said test access point.

8. (Original) A test access point in accordance with claim 7, wherein said trace is characterized by a substantially constant trace width leading up to said test access point and a narrower trace width that is narrower than said substantially constant trace width at said test access point.

9. (Original) A test access point in accordance with claim 3, further comprising:

a solder mask layered over said trace, said solder mask having a hole exposing said test access point structure, wherein said test access point structure projects along said z axis of said x-, y-, z-coordinate system above an exposed surface of said solder mask on said printed circuit board to be accessible for electrical probing by said external device.

10. (Original) A test access point in accordance with claim 9, wherein said test access point comprises a solder bead/bump.

11. (Original) A test access point in accordance with claim 10, wherein said trace is characterized by a substantially constant trace width leading up to said test access point and a narrower trace width that is narrower than said substantially constant trace width at said test access point.

12. (Original) A test access point in accordance with claim 9, wherein said test access point is formed integral to said trace and characterized by an increase in thickness at said test access point.

13. (Original) A test access point in accordance with claim 12, wherein said trace is characterized by a substantially constant trace width leading up to said test access point and a narrower trace width that is narrower than said substantially constant trace width at said test access point.

14. (Original) A method for implementing a test access point structure for a printed circuit board, said method comprising:

printing a trace along an x-y plane in an x-, y-, z-coordinate system on a dielectric, said trace generally characterized by a trace thickness along a z axis perpendicular to an x-y plane of said dielectric;

depositing a solder mask over said trace, said solder mask having a hole exposing a portion of said trace at a location for a test access point, said solder mask characterized by a constant thickness; and

conductively connecting a test access point structure to said exposed portion of said trace in said hole of said solder mask, said test access point structure projecting above an exposed surface of said printed circuit board to be accessible for electrical probing by an external device.

15. (Original) A method in accordance with claim 14, further comprising:

narrowing a width of said trace at said test access point.

16. (Original) A method in accordance with claim 15, wherein:

said method of conductively connecting a test access point structure to said exposed portion of said trace in said hole of said solder mask comprises:

filling said hole with solder paste, said solder paste comprising solder and flux; and

melting said solder paste to burn off said flux and to cause said solder to retract from walls of said hole to form a solder bead that projects above said walls of said hole.

17. (Original) A method in accordance with claim 14, wherein:

said method of conductively connecting a test access point structure to said exposed portion of said trace in said hole of said solder mask comprises:

filling said hole with solder paste, said solder paste comprising solder and flux; and

melting said solder paste to burn off said flux and to cause said solder to retract from walls of said hole to form a solder bead that projects above said walls of said hole.

18. (Original) A method for implementing a test access point structure for a printed circuit board, said method comprising:

determining a location of a test access point along a trace of said printed circuit board;

applying said trace along an x-y plane in an x-, y-, z-coordinate system on a dielectric of said printed circuit board, said trace generally characterized by a substantially constant trace thickness along a z axis of said an x-, y-, z-coordinate system wherein said trace thickness is increased at said test access point location to form a test access point structure that projects above an exposed surface of said printed circuit board to be accessible for electrical probing by an external device.

19. (Original) A method in accordance with claim 18, further comprising:

narrowing a width of said trace at said test access point.

20. (Original) A method for implementing a test access point structure on a printed circuit board, said method comprising:

obtaining a fixture probe location of a fixture probe in an x-y plane of an x-, y-, z-coordinate system of a test fixture;

determining a corresponding test access point location in an x-y plane of an x-, y-, z-coordinate system of said printed circuit board that corresponds to said fixture probe location when said printed circuit board is mounted in said test fixture;

printing a trace on a dielectric of said printed circuit board, said trace printed along said x-y plane of said printed circuit board and passing through said test access point location and generally characterized by a trace thickness along a z axis perpendicular to said x-y plane of said printed circuit board;

conductively connecting a test access point structure to said trace at said test access point location, said test access point structure projecting above an exposed surface of said printed circuit board to be accessible for electrical probing by said fixture probe.

21. (New) A method in accordance with claim 20, where said step for conductively connecting a test access point structure to said trace at said test access point location further comprises:

forming said test access point integral to said trace.

22. (Original) A method in accordance with claim 21, wherein said step of conductively connecting a test access point structure to said trace at said test access point location comprises:

increasing a thickness of said trace at said tap location.

23. (Original) A method in accordance with claim 22, comprising:

depositing one or more printed circuit board layers over said trace, said one or more printed circuit board layers each having a hole exposing said trace at said test access point location.

24. (Currently Amended) A method in accordance with claim [[21]] 20, wherein said step of conductively connecting a test access point structure to said trace at said test access point location comprises:

attaching a solder bump to said trace at said tap location.

25. (Original) A method in accordance with claim 24, comprising:

depositing one or more printed circuit board layers over said trace, said one or more printed circuit board layers each having a hole exposing said trace at said test access point location prior to attaching said solder bump to said trace at said tap location.